

WHAT IS CLAIMED IS:

1. A method of forming an artificial Shiro of Matsutake comprising:

5 culturing Matsutake hyphae in a culture substrate containing a substance capable of controlling the cell membrane permeability of the hyphae as an active principle.

2. A method of forming an artificial Shiro of Matsutake comprising:

10 culturing Matsutake hyphae in a culture substrate containing a substance capable of enhancing the hydrophilic property of the hyphae as an active principle.

15 3. A method of forming an artificial Shiro of Matsutake comprising:

culturing Matsutake hyphae in a culture substrate containing a surfactant and/or a natural vegetable oil as an active principle.

20 4. A method of forming an artificial Shiro of Matsutake comprising:

culturing Matsutake hyphae in a culture substrate containing a fatty acid ester as an active principle.

5. A method of forming an artificial Shiro of Matsutake, comprising:

25 inducing growth of Matsutake hyphae by aseptically homogenizing a colony of Matsutake hyphae and aseptically culturing the obtained hyphae in a liquid

nutrient medium;

preparing an inoculum of Matsutake hyphae by
aseptically replacing the liquid nutrient medium
containing the growth-induced Matsutake hyphae with a
5 liquid nutrient medium containing no carbon source; and

culturing aseptically the inoculum of the
Matsutake hyphae in a culture substrate containing
a substance capable of controlling the cell membrane
permeability of the hyphae as an active principle.

10 6. A method of forming an artificial Shiro of
Matsutake, comprising:

inducing growth of Matsutake hyphae by aseptically
homogenizing a colony of Matsutake hyphae and
aseptically culturing the obtained hyphae in a liquid
15 nutrient medium;

preparing an inoculum of Matsutake hyphae by
aseptically replacing the liquid nutrient medium
containing the growth-induced Matsutake hyphae with a
liquid nutrient medium containing no carbon source; and

20 culturing aseptically the inoculum of the
Matsutake hyphae in a culture substrate containing a
substance capable of enhancing the hydrophilic property
of the hyphae as an active principle.

25 7. A method of forming an artificial Shiro of
Matsutake, comprising:

inducing growth of Matsutake hyphae by aseptically
homogenizing a colony of Matsutake hyphae and

aseptically culturing the obtained hyphae in a liquid nutrient medium;

preparing an inoculum of Matsutake hyphae by
aseptically replacing the liquid nutrient medium
5 containing the growth-induced Matsutake hyphae with a
liquid nutrient medium containing no carbon source; and
culturing aseptically the inoculum of the
Matsutake hyphae in a culture substrate containing a
surfactant and/or a natural vegetable oil as an active
10 principle.

8. A method of forming an artificial Shiro of Matsutake, comprising:

inducing growth of Matsutake hyphae by aseptically
homogenizing a colony of Matsutake hyphae and
15 aseptically culturing the obtained hyphae in a liquid
nutrient medium;

preparing an inoculum of Matsutake hyphae by
aseptically replacing the liquid nutrient medium
containing the growth-induced Matsutake hyphae with a
20 liquid nutrient medium containing no carbon source; and
culturing aseptically the inoculum of the
Matsutake hyphae in a culture substrate containing
a fatty acid ester as an active principle.

9. The method of forming an artificial Shiro of
25 Matsutake according to claim 1, wherein a solution
containing the active principle at the concentration
of 0.2 to 10 wt% is used as the active principle.

10. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

5 11. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

10 12. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

15 13. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

20 14. The method of forming an artificial Shiro of Matsutake according to claim 6, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

15. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein a solution containing the active principle at the concentration of 0.2 to 10 wt% is used as the active principle.

25 16. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein a solution containing the active principle at the concentration of

0.2 to 10 wt% is used as the active principle.

17. The method of forming an artificial Shiro of Matsutake according to claim 1, wherein a solution containing the active principle which is prepared using
5 an organic solvent and distilled water is used as the active principle.

18. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein a solution containing the active principle which is prepared using
10 an organic solvent and distilled water is used as the active principle.

19. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein a solution containing the active principle which is prepared using
15 an organic solvent and distilled water is used as the active principle.

20. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein a solution containing the active principle which is prepared using
20 an organic solvent and distilled water is used as the active principle.

21. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein a solution containing the active principle which is prepared using
25 an organic solvent and distilled water is used as the active principle.

22. The method of forming an artificial Shiro of

Matsutake according to claim 6, wherein a solution containing the active principle which is prepared using an organic solvent and distilled water is used as the active principle.

5 23. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein a solution containing the active principle which is prepared using an organic solvent and distilled water is used as the active principle.

10 24. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein a solution containing the active principle which is prepared using an organic solvent and distilled water is used as the active principle.

15 25. The method of forming an artificial Shiro of Matsutake according to claim 1, wherein either one of soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

20 26. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein either one of soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

25 27. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein either one of soil having a grain size of 3 mm or less and

an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

28. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein either one of
5 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

29. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein either one of
10 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

30. The method of forming an artificial Shiro of Matsutake according to claim 6, wherein either one of
15 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

31. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein either one of
20 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

32. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein either one of
25 soil having a grain size of 3 mm or less and an artificial substrate having a grain size of 2 mm or less is used as the culture substrate.

33. The method of forming an artificial Shiro of Matsutake according to claim 1, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and
5 weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

34. The method of forming an artificial Shiro of Matsutake according to claim 2, wherein the active principle is added to the culture substrate in a state
10 of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

35. The method of forming an artificial Shiro of Matsutake according to claim 3, wherein the active principle is added to the culture substrate in a state
15 of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

36. The method of forming an artificial Shiro of Matsutake according to claim 4, wherein the active principle is added to the culture substrate in a state
20 of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

37. The method of forming an artificial Shiro of Matsutake according to claim 5, wherein the active principle is added to the culture substrate in a state
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of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

5 38. The method of forming an artificial Shiro of Matsutake according to claim 6, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

10 39. The method of forming an artificial Shiro of Matsutake according to claim 7, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

15 40. The method of forming an artificial Shiro of Matsutake according to claim 8, wherein the active principle is added to the culture substrate in a state of a solution containing the active principle, and weight ratio of the solution containing the active principle to the total weight is 15 to 30 wt%.

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